

FINALLY BLOCK

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finally Block in Java

The finally block is used in **exception handling** to execute a block of code regardless of whether an exception is thrown or not. It is most commonly used to perform cleanup operations such as closing files, releasing resources, or cleaning up memory.

SYNTAX:

```
try {
    // Risky code
} catch (ExceptionType e) {
    // Exception handling code
} finally {
    // Cleanup or final code
    // connection closed
    // file closed
}
```

Que. Arise that why we can't close file in the try block

Ans-> if any exception occurs while reading or writing a file then below the code will not execute and thus resource will not close.

(many open files)

One more way :

```
try {
    // Risky code
} finally {
    // Cleanup or final code
}
```

```
import java.io.*;
```

```
public class FinallyExample {
    public static void main(String[] args) {
        FileReader reader = null;
        try {
            reader = new FileReader("file.txt");
            int data = reader.read();
            System.out.println("File read successfully: " + data);
        } catch (IOException e) {
            System.out.println("An error occurred: " + e.getMessage());
        } finally {
            try {
                if (reader != null) {
                    reader.close();
                    System.out.println("File closed successfully");
                }
            } catch (IOException e) {
                System.out.println("Error closing the file: " + e.getMessage());
            }
        }
    }
}
```

```
}
```

➤ With return statement :

```
package dummy;
public class FinallyWithReturn {
    public static int test() {
        try {
            return 10;
        } finally {
            return 20; // Overrides the try block's return
        }
    }

    public static void main(String[] args) {
        System.out.println(test()); // Output: 20
    }
}
```

➤ When the finally block is not executed?

1. System.exit(0) ->jvm close and shutdown this :
2. If error occur during the program like out of memory then there is a possibility.